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OXYMITRA (TESSELLINA) IN THE UNITED STATES

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The family Ricciaceae, as treated by Schiffner in Engler & Prantl, Die natürlichen Pflanzenfamilien,¹ comprises three genera, *Riccia*, *Ricciocarpus*, and *Tessellina*. Alexander Braun's genus *Ricciella*, with *Riccia fluitans* L. as the type, has been accepted as valid by Warnstorf,² by Evans,³ and by some other writers on the Hepaticae, though Schiffner, K. Müller,⁴ and perhaps the ma-

majority of the modern students of the Hepaticae prefer to consider it a subgenus of *Riccia*. Occasionally a recent student⁵ has doubted the validity of the genus *Ricciocarpus*, but no one in recent years, so far as I am aware, has had any scruples in recognizing the generic rank of the remarkable plant currently known as *Tessellina*. The groups known as *Riccia*, *Ricciella*, and *Ricciocarpus*, whether genera or not, have long been recognized as having North American representatives, but the genus *Tessellina*, with its single species, was known only from the

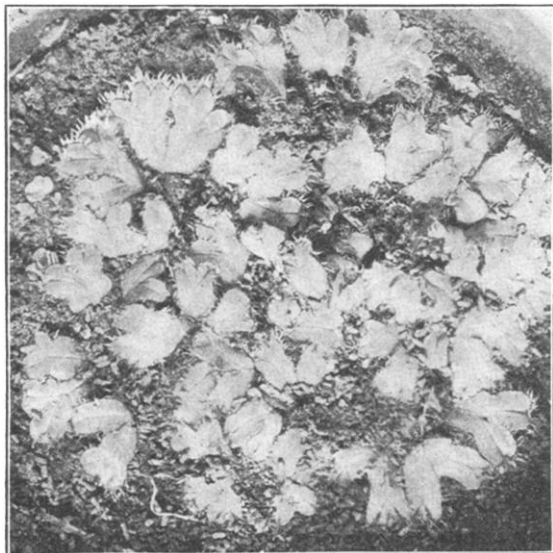


FIG. 1.—*Oxymitra paleacea* Bisch. Nat. size. Sterile. Grown at the N. Y. Botanical Garden from specimens collected near Austin, Texas, by Dr. M. S. Young, Feb. 1914.

Mediterranean region of Europe and Africa until Balansa, somewhat more than thirty years ago, found it in Paraguay. Stephani⁶ has reported it from Brazil

¹ 13: 8-15. 1893. Schiffner spells *Tessellina* with one "l", though Dumortier, the author of the name, seems consistently and correctly to have used two "l's."

² Kryptogamenflora der Mark Brandenburg 1: 80. 1903.

³ Rhodora 9: 56. 1907.

⁴ In Rabenhorst, Kryptogamen-flora von Deutschland, Oesterreich und der Schweiz 6: 140. 1911. 1907.

⁵ See Lewis, C. E. The embryology and development of *Riccia lutescens* and *Riccia crystallina*. Bot. Gaz. 41: 109-138. pl. 5-9. 1906.

⁶ Bull. Herb. Boiss. 6: 759. 1898.

also. With the known distribution of this striking hepatic thus limited, it was an agreeable surprise last February to receive from Dr. M. S. Young, of the School of Botany of the University of Texas, some vigorous living plants labeled "*Tessellina*" and accompanied by the information that they were abundant in certain open spots in the "upland post-oak woods" in the vicinity of Austin. The specimens bore mature sporogonia and seemed to exhibit no characters⁷ that could be depended upon to separate them from the single recognized species of the genus, currently known as *Tessellina pyramidata*. The spores of the Texas plant average considerably larger than those of specimens from southern Europe, but it is doubtful if this difference is sufficiently pronounced and constant to justify a specific segregation. The spores, measured the longest way, show diameters ranging from 125 to 175 μ . A specimen from lower Austria (Krypt. Exsicc. 181) has spores with maximum diameters of 104–115 μ ; one from Portugal, 121–142 μ ; while one from Paraguay (*Balansa* 3709) approaches the Texas plant with spores 136–150 μ in maximum diameter. It should be added that the Texas plant is evidently dioicous, like plants of the genus elsewhere, but antheridial individuals have not been found in the two sendings thus far made by Dr. Young. It is to be hoped that these will soon be met with in Texas or that they may appear in the thriving cultures of the plant that have been established in the propagating houses of the New York Botanical Garden.⁸ The Texas specimens, it may be said, show the long conspicuous ventral scales that are characteristic of the form of the species described by Bischoff as *Oxymitra paleacea*.

It has been remarked above that the single recognized species of this genus is currently known as *Tessellina pyramidata* and this is doubtless a defensible statement, though Stephani⁹ in his *Species Hepaticarum* has adopted for it the name *Rupinia pyramidata*, and the name *Oxymitra pyramidata* has also enjoyed recognition within rather recent times. The nomenclature of both genus and species is somewhat involved. Under the provisions of the "American Code" it seems clear that the legal name for the genus is *Oxymitra* rather than *Tessellina* and it may scarcely be doubted that the usual interpretations of the "Vienna Rules" would lead to the same result. If the doubtful *Riccia incrassata* of Bertero is ignored, as it must be unless an authentic specimen should prove it to apply to this plant, the legal specific name of the plant, under the American Code, is apparently *paleacea*, though under the Vienna Rules the specific name *pyramidata* is probably still defensible. The main facts bearing upon the nomenclature of the genus and species, from the point of view of adherents of the American Code, may be summarized as follows:

⁷ Mr. Wm. Edw. Nicholson, of Lewes, Sussex, England, to whom I have sent specimens, has directed my attention to the fact that the radial walls of the epidermal cells bounding the pores or stomata in the Texas plant are more strongly and more abruptly thickened than are the corresponding walls in European specimens, so that the rays of the five- or six-pointed star surrounding the pore often have ovoid or dome-shaped rather than lanceolate-acuminate outlines.

⁸ As these notes are going to press, antheridia have been found in the living specimens, and their position seems to warrant a new specific name for the Texan plant. Further notes will follow.

OXYMITRA Bisch. in Lindenb. Syn. Hep. Eur. 124. 1829.

Tessellina Dumort. Comm. Bot. 78, *pro parte minima et atypica*. 1822.

Rupinia Corda, in Opiz, Beitr. Naturgesch. 650. 1829. Not *Rupinia* L. f. Suppl. 69. 1781.

Pycnoscenus Lindb. Öfv. Sv. Vet.-Akad. Förh. 19: 606. 1863.

OXYMITRA PALEACEA Bisch. loc. cit.

Riccia pyramidata Raddi, Opus. Sci. Bologna 2: 350. pl. 15. f. 3. 1818. Not *Riccia pyramidata* Willd. (excl. syn.) Mag. Bot. 2⁴: 9. 1788.

Tessellina pyramidata Dumort. Comm. Bot. 78, *pro parte atypica*. 1822. Hep. Eur. 165. 1874. Schiffn. in E. & P. Nat. Pflanzenfam. 1³: 15. f. 5. 1893. K. Müll. in Rabenh. Krypt.-Fl. Deuts. 6: 217. f. 140, 141. 1907.

Oxymitra polycarpa Bisch. loc. cit. 125.

Rupinia pyramidata Corda, loc. cit. Steph. Bull. Herb. Boiss. 6: 759. 1898.

Oxymitra pyramidata Hüben. (excluding certain synonyms) Hepaticol. Germ. 24. 1834. Bisch. Nova Acta Acad. Leop.-Carol. 17: 1049. pl. 70. f. II, III. 1835. Lindenb. Nova Acta Acad. Leop.-Carol. 18: 491. pl. 35. 1836. Nees, Naturges. Eur. Leberm. 4: 382. 1838.

Pycnoscenus pyramidatus Lindb. loc. cit.

Tessellina has been rejected by Stephani (loc. cit.) as a *nomen nudum*, but it was hardly that under any of the modern codes of nomenclature. The original *Tessellina* Dumort., and the *Tessellina* as it remained until after Bischoff had established his *Oxymitra*, rested on the following words:

"2. *Tessellina*, fruit sortant par une fente; on doit rapporter a ce dernier, la *R. reticulata* poir. non sw. = *Tessellina coriandri* nob. et la *R. pyramidata* willd. = *Tessellina pyramidata*, nob."

The first of these two species is manifestly the plant now known as *Corsinia marchantioides* and it is scarcely open to doubt that it was Micheli's conspicuously reticulate or tessellate figure of the thallus of *Corsinia* and Micheli's diagnosis, *Riccia major*, *Coriandri sapore*, *foliorum superficie veluti tessellata*," that suggested to Dumortier the generic name *Tessellina*. It is obvious that under the American Code the first of these two species is the type of the genus *Tessellina* and the provisions of the Vienna Rules¹⁰ may possibly be interpreted as pointing to the same conclusions.

Riccia pyramidata Willd., the second of the two original species of *Tessellina*, is now generally conceded to have been intended for some true *Riccia* with elevated antheridial ostioles. Willdenow's rather detailed description is drawn

¹⁰ "Art. 45. When a genus is divided into two or more genera, the name must be kept and given to one of the principal divisions. If the genus contains a section or some other division which, judging by its name or its species, is the type or origin of the group, the name is reserved for that part of it."

from a specimen or specimens collected by him only once and in the vicinity of Halle. *Tessellina pyramidata* of modern authors is said by K. Müller and others not to occur within the boundaries of Germany. Willdenow, however, believed his plant to be the same as Micheli's *Riccia media obscure virens*, etc. and cited Micheli's description and figure and Dillenius's copy of Micheli's figure. And this incidental and mistaken reference to Micheli's work in connection with the publication of the second species of *Tessellina* mentioned by Dumortier is all that "Tessellina" in the modern sense hangs upon. In other words, the genus *Tessellina* was originally based upon two species, of which the first and the evident type was the plant for which Raddi had previously established the genus *Corsinia*, and of which the second, interpreted by description rather than by alleged synonymy, was a genuine *Riccia*. It is true that Dumortier afterwards essentially modified and reformed his genus *Tessellina*, but meanwhile the *Oxymitra* of Bischoff had been established in a manner approved by all the modern rules of nomenclature. The name *Oxymitra* is, however, unfortunately, in current use for a genus of Annonaceae, but that, as a generic name, dates from 1855, though the name appears to have been proposed by Blume for a section as early as 1829¹¹, the date of the founding of *Oxymitra* Bisch.

The great state of Texas offers an almost unexplored field so far as its less conspicuous bryophytes are concerned and from the collections being made at Austin and elsewhere by Dr. M. S. Young and Dr. F. McAllister, and at College Station by Dr. F. H. Blodgett it is manifest that the state is especially well supplied with the Ricciaceae. Peculiarly interesting species of *Riccia* proper have been found there by these botanists and it is possible that some of them may form the subject of a later communication to the BRYOLOGIST.

NEW YORK BOTANICAL GARDEN,
BRONX PARK, NEW YORK CITY.

HENRY WILLEY.

In connection with the publication of a new species of lichen in the May issue of the BRYOLOGIST it is fitting that mention should be made of the noted lichenist for whom this plant is named, Mr. Henry Willey. Born in Geneseo, New York, July 10, 1824, he died at South Weymouth, Massachusetts, March 15, 1907. At first a teacher in the Mattapoisett schools, he later became editor of *The Standard*, New Bedford, Massachusetts, but from his boyhood days he had been a collector and student of the lichens and was a pupil of Edward Tuckerman, whose last work he edited. As a man it is said that he was exceedingly diffident and peculiar, living mainly in seclusion with his books and collections

¹¹ Le Jolis (Mém. Soc. Nat. Cherbourg 29: 152. 1894), giving this date as 1828, has made this a ground for giving up *Oxymitra* as a genus of Hepaticae.